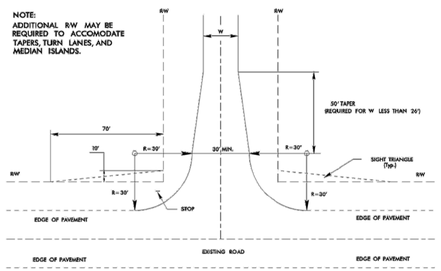


NOTE: Drainage easements may be required to accomodate drainage beyond the right-of-way.

FIGURE 4

RECOMMENDED ROAD CONNECTION

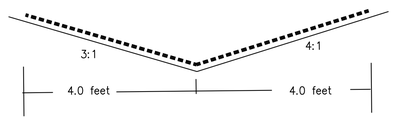
NEW RESIDENTIAL LOCAL ROAD OR RESIDENTIAL COLLECTOR ROAD AND EXISTING STATE MAINTAINED ROAD

STOP CONDITION

Morgan Ridge Construction Sequence

1) Submit a Land Disturbing Permit Application at least 30 days prior to any land disturbing activity occurring.
2) Survey, flag and stake construction limits and riparian buffer boundaries.
3) Organize onsite pre-construction meeting with Chatham County Environmental Quality Department Staff, Engineer, Owner and Contractor to review site plan prior to land disturbing activities. Land-Disturbing Permit and Approved Plans will be provided at this meeting. (919-542-8268).
4) Begin initial clearing and grading to install construction entrance.
5) Continue initial clearing to install perimeter silt fence and tree protection fence up to station 10+00.
6) Contact Chatham County Watershed Protection inspector for inspection of the site.
7) Once the inspector approves begin mass clearing and grading of the site up to Station 10+00 and
install all roadside swales and skimmer basin #1 and riser basin #2. Stabilize all roadside swales and install rock check dams. Bring roadway and shoulders as close to final grade as possible given site conditions and install temporary diversion swale across road to divert water from the stream crossing and into riser basin #2. Temporary diversion swale should be reinstalled at the end of each work day.
8) Contact Chatham County Watershed Protection inspector for inspection of the site prior to clearing for the stream crossing.
9) Once swales and skimmer basins are installed begin clearing the first side of the riparian buffer for the first stream crossing (Impact 1). See Sheet C14 for construction details related to Impact 1 (station 10+90).
10) After clearing the first side install all instream devices, coffer dams, and temporary stream crossing.
11) Begin clearing the second side of the riparian buffer.
12) Once clearing for Impact 1 has been completed begin installation of the culvert. Continue installation of Impact 1 until the crossing is at final grade and permanently stabilize the area immediately after completion.
13) Once Impact 1 is completed continue clearing and grading toward Impact 2 and install erosion control measures.
14) Follow steps 6-12 for Impact 2 (station 14+83). See Sheet C14 for construction details related to Impact 2.
15) Once Impact 2 has been completed continue clearing, grading, and installation of erosion control measures through station 25+00. Install all roadside swales, riser basin #3, and skimmer basin #4.
16) Once erosion control measures and basins are installed begin grading roadway and shoulders and the installation of culverts entering basins.
17) Complete the clearing and grading for Impact 3 following steps 6-12 above. See Sheet C14 for construction details related to Impact 3.
18) Once site is at final proposed grade begin permanent stabilization of entire site.
19) Contact Chatham County Watershed Protection inspector for inspection of final stabilization.
20) Obtain approval from Chatham County Watershed Protection prior to beginning the conversion of temporary skimmer basins into permanent stormwater basins.
21) Routine maintenance of stabilization and repairs of erosion shall continue until the site receives a Letter of Completion from Chatham County Watershed Protection.

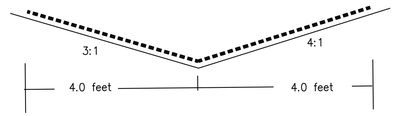
Construction Sequence



Permanent Lining Channel - roadway

N.T.S. North American Green SC250

- USE IN ROADSIDE DITCH STATION 16+00 TO 20+00 LEFT

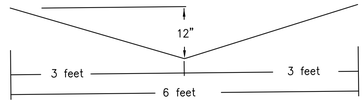


Grass Lined Channel - roadway

N.T.S. Grass-lined channel with excelsior matting

- USE IN ALL ROADWAY DITCHES UNLESS CALLING FOR NAG SC250

DITCH LINING DETAILS IN ROADWAY

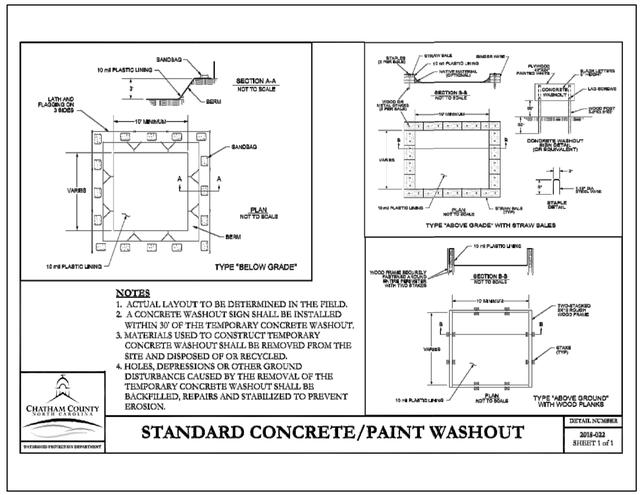


TDD - TEMPORARY DIVERSION DITCH

N.T.S.

Grass-lined channel
no additional lining

	SEDIMENT BASIN #1	RISER BASIN #2	RISER BASIN #3	SEDIMENT BASIN #4
SKIMMER SIZE	2 inch	2.0 inch	2.0 inch	2.0 inch
SKIMMER ORIFICE SIZE	1.25 inch	1.5 inch	1.5 inch	0.75 inch
SKIMMER ELEVATION (POND)	500.0 ft	503.0 ft	498.0 ft	527.0 ft



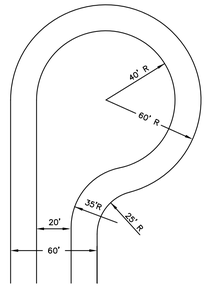
MMF Riparian Buffer Mix

Recommended application rate 20-25 lbs. per acre

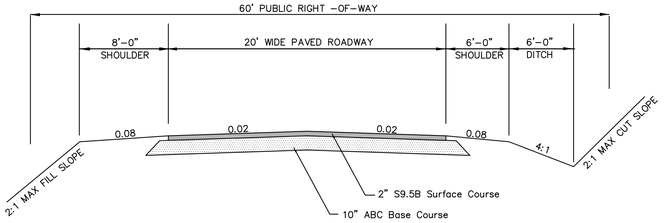
Species	Common Name	Percent
Agrostis perennans	Autumn bentgrass	15
Andropogon gerardii	Big bluestem	10
Coreopsis lanceolata	Lanceleaf coreopsis	10
Elymus virginicus	Virginia wild rye	20
Juncus effusus	Soft rush	5
Panicum virgatum	Switchgrass	15
Rudbeckia hirta	Black-eyed susan	10
Schizachyrium scoparium	Little bluestem	5
Sorghastrum nutans	Indian grass	5
Tripsacum dactyloides	Eastern gamagrass	5
		100

Riparian Buffer Seed Mix

seed mixture can be purchased from Mellow Marsh Farm in Siler City, NC



OFFSET CUL-DE-SAC



MORGAN RIDGE WAY (COLLECTOR ROAD)

Effective October 1, 2010, persons conducting land-disturbing activities larger than one acre must inspect their project after each phase of the project, and document the inspection in writing.

A Self-Inspection Report for Land Disturbing Activity as Required by NCGS 113A-54.1 is available for use. It can be completed by hand or completed as an Excel spreadsheet. An alternative is to make notations on the copy of the approved erosion and sedimentation control plan that is kept on the project site. Rule 15A NCAC 04B. 0131 states that "… documentation shall be accomplished by initialing and dating each measure or practice shown on a copy of the approved erosion and sedimentation control plan or by completing, dating and signing an inspection report that lists each measure, practice or device shown on the approved erosion and sedimentation control plan.

Who can conduct the inspection- The financially responsible party, landowner or their agent may conduct the inspection.

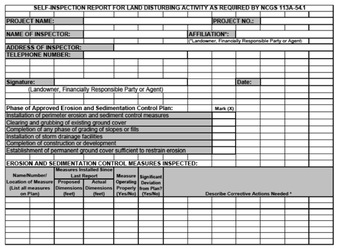
What has to be inspected - All of the erosion and sedimentation control measures, including sedimentation control basins, sedimentation traps, sedimentation ponds, rock dams, temporary diversions, temporary slope drains, rock check dams, sediment fence or barriers, all forms of inlet protection, storm drainage facilities, energy dissipaters, and stabilization methods of open channels must be inspected.

The need for ground cover should be checked. Temporary or permanent ground cover must be provided on exposed graded slopes and fills within 14 calendar days of the completion of a phase of grading.

Do newly installed sedimentation control basins have to be measured - Yes, the actual dimensions of the basins have to be checked, usually with a tape measure, and compared to the dimensions on the approved plan.

Do newly installed sedimentation control basins have to be measured by a Professional Land Surveyor - No. Generally the width and length of basins can be measured with a tape measure. A level and survey rod may be useful in checking the depth of a basin. Only relative elevations, comparing the bottom and top elevations are necessary.

SELF INSPECTION REPORTING GUIDELINES



SELF-INSPECTION REPORT FOR LAND DISTURBING ACTIVITY AS REQUIRED BY NCGS 113A-54.1

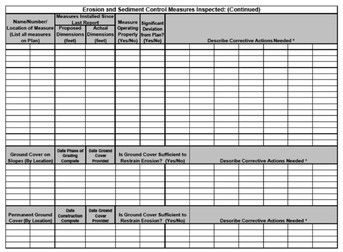
PROJECT NAME: PROJECT NO.:
NAME OF INSPECTOR: AFFILIATION*:
ADDRESS OF INSPECTOR: * (Landowner, Financially Responsible Party or Agent)
TELEPHONE NUMBER:
Signature: Date:
(Landowner, Financially Responsible Party or Agent)

Phase of Approved Erosion and Sedimentation Control Plan:	Mark (X)
Installation of perimeter erosion and sediment control measures	
Clearing and grubbing of existing ground cover	
Completion of any phase of grading of slopes or fills	
Installation of storm drainage facilities	
Completion of construction or development	
Establishment of permanent ground cover sufficient to restrain erosion	

EROSION AND SEDIMENTATION CONTROL MEASURES INSPECTED:

Name/Number/ Location of Measure (List all measures on Plan)	Measures Installed Since Last Report: Proposed Dimensions (feet)	Measures Installed Since Last Report: Actual Dimensions (feet)	Measure Operating Properly (Yes/No)	Significant Deviation from Plan? (Yes/No)	Describe Corrective Actions Needed *

* List actions taken to correct deviation or restore sediment damage on "Actions Taken Sheet" Page 1



Erosion and Sediment Control Measures Inspected: (Continued)

Name/Number/ Location of Measure (List all measures on Plan)	Measures Installed Since Last Report: Proposed Dimensions (feet)	Measures Installed Since Last Report: Actual Dimensions (feet)	Measure Operating Properly (Yes/No)	Significant Deviation from Plan? (Yes/No)	Describe Corrective Actions Needed *

Ground Cover on Slopes (By Location)	Date Phase of Grading Complete	Date Graded Cover Provided	Is Ground Cover Sufficient to Restrain Erosion? (Yes/No)	Describe Corrective Actions Needed *

Permanent Ground Cover (By Location)	Date Construction Complete	Date Ground Cover Provided	Is Ground Cover Sufficient to Restrain Erosion? (Yes/No)	Describe Corrective Actions Needed *

*List actions taken to correct deviation or restore sediment damage on "Actions Taken Sheet." Page 2

Warren D. Mitchell, PE
Civil Engineering
104 Amber Wood Run
CHAPEL HILL, NORTH CAROLINA 27516
warrendmitchellpe@gmail.com
P (919) 593-1916

NORTH CAROLINA PROFESSIONAL SEAL 22547 ENGINEER WARREN D. MITCHELL
3/4/19

REVISIONS
1. 11/15/18 NCDOT comments
2. 12/5/18 EC and Stormwater
3. 12/19/18 EC and Stormwater
4. 1/22/19 EC and NCDOT
5. 2/4/19 NCDOT Revisions
6. 3/4/19 Cul-de-soc Detail

MORGAN RIDGE SUBDIVISION Construction Drawings

Chatham County, North Carolina

August 20, 2018

Scale: NTS

Details

C11